

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2000243562 A**

(43) Date of publication of application: **08.09.00**

(51) Int. Cl. **H05B 33/10**  
**H01L 51/00**  
**H01L 29/786**  
**H05B 33/14**  
**H05B 33/22**

(21) Application number: **2000038886**  
(22) Date of filing: **16.02.00**  
(30) Priority: **16.02.99 GB 99 9903389**

(71) Applicant: **SHARP CORP**  
(72) Inventor: **HUDSON ANDREW JAMES**  
**ANDERSON SALLY**  
**WEAVER MICHAEL STUART**  
**TOMBLING CRAIG**

**(54) OPTOELECTRONICS STRUCTURE AND MANUFACTURE THEREOF**

**(57) Abstract:**

**PROBLEM TO BE SOLVED:** To provide an optoelectronics element capable of restricting generation of cross talk between adjacent picture elements by providing an electron transport area in one surface, a hole transport area in an opposite surface and the organic charge transport layer structure diffused with one or more dopant at the only one part in the thickness direction.

**SOLUTION:** An electrode formed of a conductive film pattern provided on a transparent substrate 10 is coated with the charge transport material so as to form a charge transport layer 12. The charge transport layer 12 is printed with the dye solvent having a low molecular weight as a dopant by an ink jet method. The dye is diffused in the charge transport layer 12 so as to form a local area 16 for transportation rebind/emitter. The top surface of the charge transport layer 12 smoothed by eliminating the excessive dye is formed with a polymer layer 18 made of an opposite charge transport material to the material of the charge

transport layer 12, and an electrode is formed thereon while positioning it for patterning in the local area 16. The local area 16 is separated from the electrode 12, and generation of light emission quenching is prevented.

COPYRIGHT: (C)2000,JPO

